

Perceived Competence as a Mediator in Parental Engagement in Speech Therapy

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ABSTRACT

Parental engagement has been recognised as a critical factor in providing optimal speech therapy services to children. However, it continues to be challenging for clinicians to effectively engage parents in speech and language intervention for their children. Therefore, this study was conducted to investigate the roles of parental expectation and parent-therapist communication on parental engagement in speech therapy and to determine the contribution of the parent's perceived competence as a mediator. A total of 389 respondents were selected from government hospitals in Malaysia for this cross-sectional study. Four instruments were administered: Parental Expectation Scale, Therapist-Parent Communication Questionnaire, Perceived Competence Scale, and Parent Home-programme Compliance Questionnaire. In addition, descriptive, bivariate, and mediation analyses were performed using SPSS and Smart-PLS software to address the study objectives. The results showed that perceived competence partially mediated the relationship between communication and expectation on parental engagement. Thus, it can be concluded that to ensure parental engagement in a

child's intervention which is vital for a better outcome. Parents need to be competent and believe strongly in their capabilities to practise in speech and language intervention. Moreover, policymakers and clinicians should focus on strategies that can improve parental expectations and communication.

Keywords: Competence, parental engagement, speech and language disorder, speech therapy

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INTRODUCTION

The involvement of family members, especially parents, is one of the key principles upheld by many professional speech-language pathology associations (American Speech-Language-Hearing Association, 2008). Parental involvement is considered the best practice in children's early intervention (Division for Early Childhood, 2014). The amount of practice received by children can be increased by involving and engaging parents in the intervention so that the relevant speech and language activities can be implemented with their children at home (Sugden et al., 2019). Furthermore, parents involvement in their children's intervention can maintain the targeted development during their daily communication at home (Skeat & Roddam, 2019).

Parental engagement is a complex and multifaceted process in early speech therapy intervention. There is no single path that ensures engagement or disengagement. Parental engagement is frequently associated with parental factors such as their expectation, competence, and parent-therapist communication (King et al., 2021; Phoenix et al., 2018; Sugden et al., 2019). When these factors are adequately addressed, a positive outcome can be expected throughout the therapy session, and an active partnership or collaboration with the therapists throughout the intervention process (King et al., 2021; Melvin et al., 2021).

During the initial session of speech therapy intervention, parents need to be

enlightened about their child's treatment to set a clear expectation between what they anticipate about the service and what is experienced in reality. Such consistency in expectation increased parental engagement (Davies et al., 2017; Phoenix et al., 2018). Nevertheless, mismatched expectations about the service provided by speech therapists often arise among the parents, subsequently affecting the parents' engagement (Klatte et al., 2019). Therefore, good communication between the practitioners and parents to establish expectations early in the intervention process is crucial to ensure ongoing engagement. Apart from that, effective communication and engagement can also enhance parents' knowledge and competence, subsequently empowering them to be more confident in applying the therapy at home with their children (Oono et al., 2018; Pickard et al., 2016; Stahmer et al., 2016). Furthermore, when practitioners create the necessary support to enhance parental competence and facilitate setting achievable goals, it will produce optimal parental engagement and assist parents in experiencing success (D'Arrigo et al., 2017).

In Malaysia, the data over the past decade from the Ministry of Health (MOH) showed an annual increase of 10 to 20 per cent in speech and language disorders among children. Untreated speech and language disorders often predispose to a high risk of behavioural, emotional, and psychosocial difficulties, as well as poorer mental health and reduced employment prospects (Bercow, 2018; Johnson et al.,

2010; Qi et al., 2020; Toseeb et al., 2020). In view of the rising cases and associated risks of untreated speech and language disorders in Malaysia, necessary strategies need to be established to assist these individuals. Hence, this study aimed to determine the critical factors affecting the roles of parents in the treatment of children's speech and language disorders.

Theories and Conceptual Framework

This study was guided by the Phoenix Theory of Attendance, Participation, and Engagement (PTAPE; Phoenix et al., 2019). The theory explains essential factors that affect parents' attendance, participation, and engagement in children's rehabilitation services. Additionally, the Engagement Capacity Model (Sieck et al., 2019) was also adopted to understand the capacity for patient engagement. The theories were then integrated to determine parental engagement in speech therapy.

The Phoenix Theory of Attendance, Participation, and Engagement. The Phoenix Theory of Attendance, Participation, and Engagement (PTAPE) was developed using a constructivist grounded theory study that applied constant comparison and theoretical sampling. The theory referred to the Family Stress Theory to define high-risk families, i.e. families of children with disabilities, in describing the types of services typically offered. Based on Figure 1, PTAPE comprehensively covers all the conditions that facilitate or inhibit families from attending, participating, and

engaging in children's rehabilitation services (ABCDEF). Firstly, the theory outlines the factors from the perspective of (A) the family composition that includes adults and child factors, such as parents' age or the number of children in the family; (B) the health complexity that is about the physical and mental health of the family members; and (C) service complexity that represents the organisation and professionals involved. The ABC factors were the main barriers that can negatively impact parents' attendance, participation, and engagement. Under the PTAPE, (D) encompasses six factors, including logistics, values and beliefs, knowledge, feelings, skills, and relationship with the professionals. Next, (E) refers to the therapy process factors: expectations, motivation, communication, resources, and timing. These factors can either enhance or decrease attendance, participation, and engagement. Finally, (F) indicates the child's destination, which is for most parents to have a healthy and happy child.

The Engagement Capacity Model. The Engagement Capacity Model (ECM; Sieck et al., 2019) conceptualises the engagement capacity based on the Albert Bandura Social Cognitive Theory (Bandura, 1986). The theory describes the various ways that an individual acquires behaviour. It is believed that persons, environments, and behaviours are interconnected, influencing one another. A good understanding of this concept will assist the clinicians in patient engagement.

Based on Figure 2, The ECM revolves around the person-environment-behaviour concept that encompasses four elements.

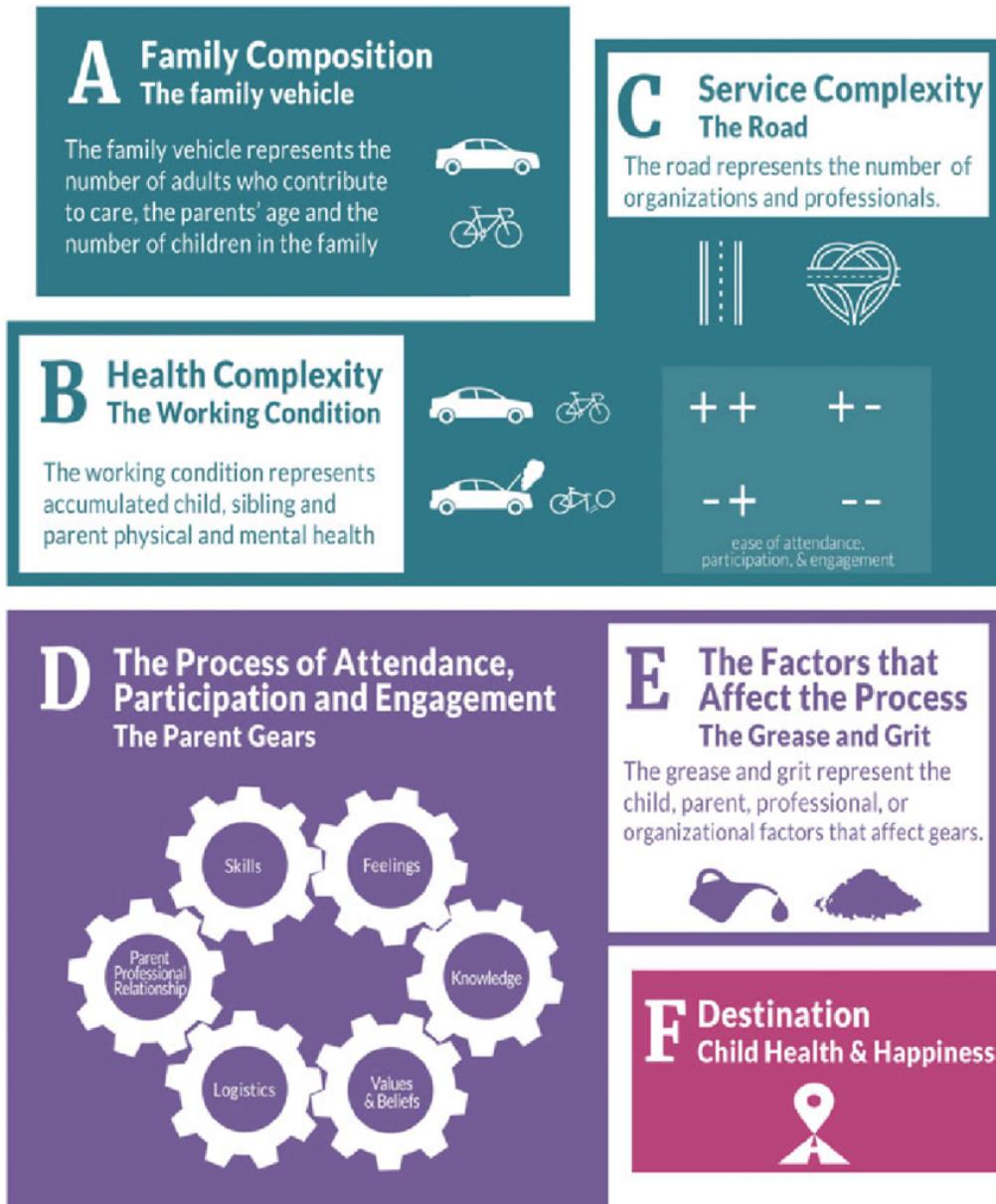


Figure 1. The Phoenix Theory of Attendance, Participation and Engagement (Phoenix et al., 2019)

The first concept, self-efficacy, is the individuals' belief in their capability to perform a behaviour. The model believes that improvement in self-efficacy leads to better adherence to treatment procedures. The second element is resources, including financial resources, access-related resources, and person-related resources that support the individuals to participate in treatment. The model explains that patients who lack resources are less likely to engage fully

in their treatment. The third element is willingness. It is related to the patient's preparedness to proceed or take action. For example, a patient's ability to engage may be inhibited by his unwillingness to share information. Finally, all the three elements mentioned above are supported by patients' knowledge, understanding, and skills, collectively refer as capabilities in this model that enable them to act.



Figure 2. The Engagement Capacity Model (Sieck et al., 2019)

Integration of Theories. There was no single theory that can explain the predictors and mediators of parental engagement. Therefore, a theoretical framework was developed in this study. Figure 3 illustrates the theoretical framework for the study that attempts to explore parental engagement in speech therapy for children with speech and language disorders. The framework incorporates the differences and similarities between the PTAPE and the ECM based on

the current literature findings of the theory and model mentioned above.

In the ECM, behaviours such as engagement are influenced by two elements, namely person and environment. Hence, any changes in these elements may change the degree of engagement. It is also applicable to the features in the PTAPE. In this study, child-related factors under (A) Family composition (the child’s sibling or the number of children in the family)

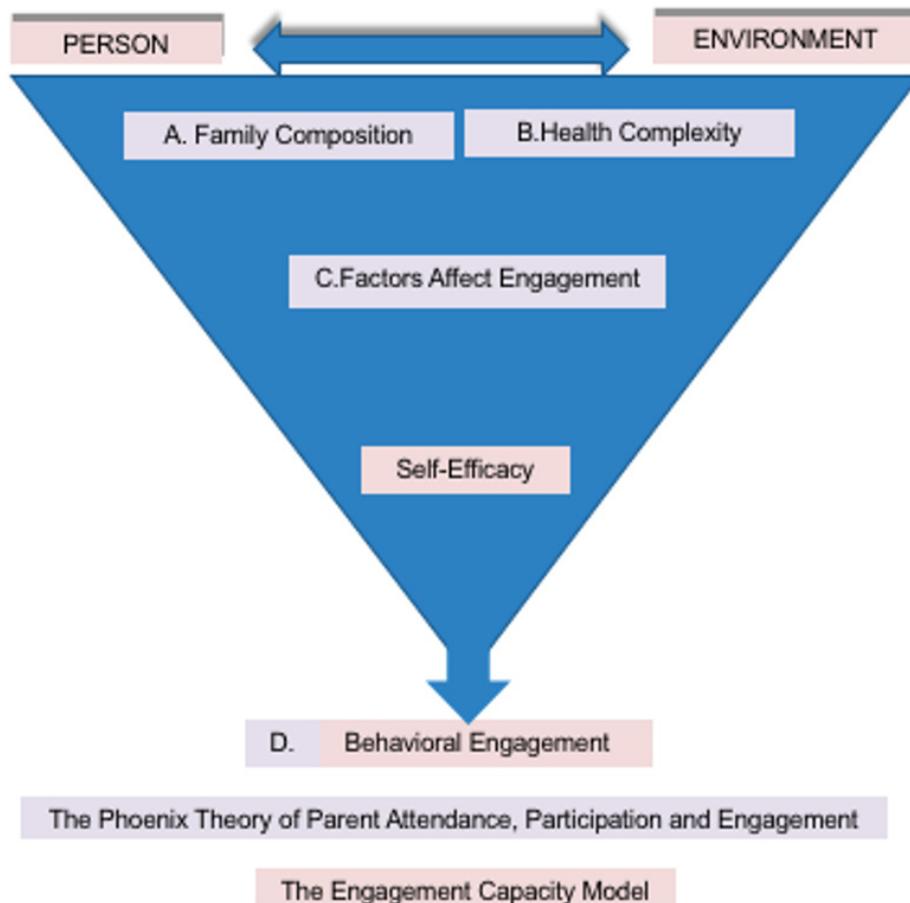


Figure 3. The theoretical framework for the study

and (B) Health complexity (the child’s medical diagnosis) appeared to be essential antecedent variables that affected parental engagement. Armed with this information, clinicians can categorise parents into different groups and customise the strategies based on the level of parental engagement. For this study, only two factors in the group of service complexity (C) were selected, namely: parental expectation for speech therapy and parent-therapist communication during therapy. Both factors are highly associated with the ability to facilitate or limit parental engagement. In addition, the component of self-efficacy in the ECM indicates whether the parents perceived that they are competent in speech therapy. Finally, all the factors are presumed to be related to one another. Therefore, any changes in one element can lead to a decreased or increased level of Behavioural

Engagement (D), i.e. parental engagement during speech therapy.

Conceptual Framework. The conceptual framework in this study was constructed based on the PTAPE (Phoenix et al., 2019) and the ECM (Sieck et al., 2019). As illustrated in Figure 4, expectation, communication, and competence were assumed to contribute to parental engagement directly. Additionally, competence is expected to be mediating the expectation and communication. Considering the direct effect of competence on engagement, it can play a mediating role between the predictors and parental engagement. Finally, the difference in the number of children in the family and the severity of the child’s medical condition was also postulated to result in different levels of parental engagement.

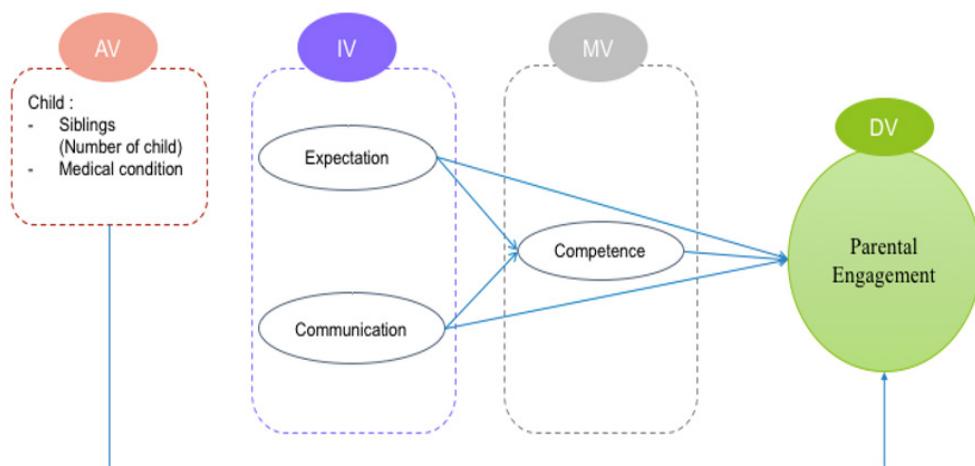


Figure 4. Conceptual framework for the study

Based on the conceptual framework, the study objectives include:

Objective 1: To compare the parental engagement between parents with one child and more than one child in the family. Ha1: There is a significant difference in parental engagement between parents with one child and more than one child in the family.

Objective 2: To compare the parental engagement between parents with a child without a medical condition and parents with a child with a medical condition. Ha2: There is a significant difference in parental

engagement between parents with a child without a medical condition and parents with a child with a medical condition.

Objective 3: To examine the mediating effects of competence on expectation, communication, and parental engagement in speech therapy. Ha3: Competence mediates the relationship between expectation and parental engagement in speech therapy. Ha4: Competence mediates the relationship between communication and parental engagement in speech therapy.

Table 1
Frequency distribution of parents' background information (N=389)

Variables	Freq.	Percent
Parents		
Father	65	17
Mother	319	82
Others (individual who have legal rights on the child e.g. step parent)	5	1
Age		
17 years and below	13	3
18-29 years old	47	12
30-49 years old	327	84
50 years and above	2	1
Race		
Malay	363	93
Chinese	19	5
Indian	3	1
Others	4	1
Academic qualification		
High School	100	26
Certificate	18	5
Diploma	112	29
Degree	144	37
Master / PhD	15	4

Table 1 (Continued)

Variables	Freq.	Percent
Household Income		
Less than RM1005	29	8
RM1006-3955	152	39
RM3956-12235	197	51
More than RM12235	11	3

METHOD

Participants

This study recruited 389 parents as participants. They were either mother or father with a child below 18 years old attending speech therapy sessions in government hospitals. Table 1 displays the sociodemographic characteristics of the participants. Most of them were mothers (82%) and Malays (93%). Every four out of five (84%) respondents were between 30 to 49 years old. According to the World Bank Classification of income levels, more than half (51%) earned more than RM 3956 monthly (upper-middle-income group). In comparison, 36% were categorised under the lower-middle-income group (RM 1006-3955).

Table 2 shows the background information of the participants' children. Most of the children were males (72%). More than half (57%) of the children were between two to four years old, followed by five to seven-year-old children (33%). Most children have more than one sibling (83%), while the rest (17%) were the only child. Less than half (41%) of the children did not have any medical conditions. In comparison, the rest had either Autism (24.9%), Downs

Syndrome (7%), Hearing Impairment (4%), Cerebral Palsy (4%), Cleft Lip and Palate (2%), ADHD (2%) and other medical conditions (16%).

Procedures

This study involved a survey using a self-administered questionnaire. First, the original questionnaire in the English language was translated into Malay, the national language of Malaysia. The Malay version of the questionnaire would help the respondents to understand the questions better. Then, the researcher did back-translation of the original English questionnaire into Malay, followed by translating Malay to English by another bilingual professional in the related field without referring to the original text (Shigenobu, 2007). Finally, all the items in the instrument were evaluated and validated by a bilingual psychologist from the Ministry of Health. Prior to data collection, a pilot study was conducted among 30 participants. The items in the questionnaire were modified based on their comments and suggestions. This study received ethics approval from the Medical Research Ethics Committee of the Ministry of Health Malaysia and permission from

the hospital directors and Clinical Research Centre of all study sites. The parents were given the option to fill in the online version or hard copy of the questionnaire that took around 30-40 minutes to complete. All the participants were given a free e-book as a token of appreciation once they returned the completed questionnaires.

Table 2
Frequency distribution of childs' background information (N=389)

Variables	Freq.	Percent
Gender		
Male	280	72
Female	109	28
Age		
Below 2 years old	10	3
2-4 years old	223	57
5-7 years old	127	33
More than 7 years old	29	8
Siblings		
No sibling	65	17
1-2 siblings	165	42
3-4 siblings	134	34
More than 4 siblings	25	6
Medical Diagnosis		
No medical condition	158	41
Autism	97	25
Hearing Impairment	16	4
Downs Syndrome	28	7
Cerebral Palsy	14	4
Cleft Lip & Palate	7	2
ADHD	7	2
Others	62	16

Measures

Standardised instruments in questionnaires were used to assess respondents'

demographic background (parent and child), parents' competence, communication, expectation, and parental engagement.

Perceived Competence Scale. The competence of the parents was assessed using the Perceived Competence Scale (PCS). It was specially adapted to fit the relevant domain in this study. The PCS examined the perceived competence among the participants in terms of their ability to engage or follow through on some commitment. For example, the individuals' adherence to healthier behaviours or their participation in activities related to child development. PCS is one of the instruments with a high level of face validity for assessing the constructs of competence. It consists of four items on a 7-point Likert scale. Some examples of the items are "I feel confident in my ability to learn this material" and "I can achieve my goals in this course". The alpha measure of internal consistency for the perceived competence items in the previous study was above 0.80, thus indicating that the scale had good reliability (Williams et al., 1998).

Therapist-Parent Communication Questionnaire. In this study, communication was measured using the Dimensions of Therapist-Parent Communication Questionnaire. The 15-item questionnaire was created based on the Parent Satisfaction with Children's Medical Care Questionnaire developed by Lewis et al. (1986) and The Medical Interview Satisfaction Scale developed by Wolf et al. (1978). The scale was rephrased based on the evaluation of the clinicians' behaviour. It uses an eight-point Likert scale between 1-"absolutely do not agree" to 8-"absolutely agree". The

items are categorised into three dimensions of communication using varimax rotation: caring (6 items), interest (5 items), and collaboration (4 items) with internal reliability alpha-value of 0.88, 0.79, and 0.83, respectively. Some examples of items are "The therapist cares about us" under the dimension of caring; "The therapist shows interest in our life at home" under the dimension of interest; and "The therapist decides without us and gives us his decision" under the dimension of collaboration (Bachner et al., 2006).

Parental Expectation Scale. Next, the parental expectation for therapy was measured using an adapted survey of the Expectations for Speech-Language Therapy developed by Macintyre (2018). The survey included questions focused on investigating parents' expectations of speech-language therapy in New Zealand based on previous research (Auert et al., 2012; Carroll, 2010; Lyons et al., 2010). The validation of the items in the survey was done through expert review. Firstly, the questions were discussed between the researcher and the professor in the related field. Then, ten practising Speech Therapists reviewed the questionnaire to check if the items were appropriate and relevant. Finally, the survey was piloted, and any changes were made accordingly. The questionnaire consists of four items on a seven-point Likert scale. Some examples of the items are "I expected to be involved in my child's speech-language therapy" and "I expected to be given home practice to do with my child".

Parent Home-Programme Compliance Questionnaire. Lastly, parental engagement in speech therapy was assessed using the Parent Home-Programme Compliance Questionnaire. It consists of four items that assess their comfort, knowledge, and ability to carry out the home programme. It is measured using a five-point Likert scale, ranging from 1-strongly disagree to 5-strongly agree. Some examples of the items are “I felt that I was skilful in carrying the home programme” and “I was able to carry out the programme as often as expected.”

The scale was validated in a study that evaluated community professionals’ compliance with consultants’ recommendations for developmentally disabled children (Cadman et al., 1986). In that study, the scale was 0.7 using weighted kappa statistics, thus indicating a good test-retest reliability. In addition, the agreement between the client’s self-reporting score on the questionnaire and independent observation was calculated. The weighted kappa was greater than 0.9, showing excellent agreement. Hence, validity was supported (Law & King, 1993).

Data Analysis

Data entry and data analysis were performed using SPSS and SMART-PLS. Data analysis started with data cleaning, followed by descriptive analysis, bivariate analysis, and PLS-SEM analysis. In the evaluation of PLS-SEM, two stages were involved. Stage one involved the reflective model evaluation

or formative model evaluation. The process continued with evaluating the structural model in stage two after the measurement quality was supported (Hair et al., 2017) by testing the proposed hypotheses and addressing the relationships between the latent variables.

RESULTS AND DISCUSSIONS

Comparison Between Parents with One Child and More Than One Child in the Family

Independent samples t-test analysis was conducted to compare the differences in parental engagement between parents with one child and more than one child in the family. The results revealed significant mean difference [$t(387) = 3.321, p = 0.001$]. The mean parental engagement score for parents with one child ($M = 4.042, SD = 0.650$) was slightly higher than those with more than one child in the family ($M = 3.746, SD = 0.657$). The effect size (d) was 0.451, indicating a small effect. The results supported the conclusion that the parental engagement between one child and more than one child in the family was significantly different. Thus, hypothesis one (H_{a1}) was accepted. Based on the findings, parents with one child in the family had a higher engagement than parents with more than one child. This finding was comparable with other studies that found families with more than one child were associated with lower program enrollment and engagement (Eisner & Meidert, 2011). The difference could be attributed to having multiple children placing additional strains on parents’ time,

energy, and finances (McConnell et al., 2014).

Comparison Between Parents with Child without Medical Condition and Parents with Child with Medical Conditions

Independent samples t-test analysis was employed to test the differences in parental engagement between parents with a child without medical conditions and parents with a child with medical conditions. There was a significant mean difference [$t(387) = 2.390, p = 0.017$] between the parental engagement of those with a child without medical condition ($M = 3.892, SD = 0.680$) and with medical condition ($M = 3.729, SD = 0.647$). However, the effect size ($d=0.247$) was small, indicating a small effect. The results concluded that the parental engagement between parents with a child without a medical condition and parents with a child with a medical condition was significantly different. Thus, hypothesis two (Ha2) was accepted. Parents who have a child without a medical condition showed higher engagement than parents whose child had a medical condition. This result was aligned with previous works by Haine-Schlagel and Walsh (2015) and Mauricio et al. (2014), whereby families whose children had more severe symptoms were less likely to engage in therapy. On the contrary, some other studies reported that the child's symptom severity predicted greater engagement, likely due to a greater perceived need for treatment (Baydar et al., 2003; Garbacz et al., 2017).

Mediation of Parental Engagement

In order to analyse the indirect effect, the direct effect must be established first. The PLS-SEM path coefficient showed the results below: Competence ($\beta = .373, p < 0.01$), Communication ($\beta = .283, p < 0.01$), and Expectation ($\beta = .168, p < 0.01$). Thus, all showed a significant direct contribution towards parental engagement. Table 3 shows the results of the mediation analysis. The bootstrapping procedure showed the significant indirect effects for Ha3 ($\beta = 0.194$) and Ha4 ($\beta = 0.068$) with t-values of 6.062 and 3.480 respectively. The 95% confidence intervals of [LL=0.134, UL=0.260] and [LL=0.032, UL=0.109] did not include the value zero in between, thus indicating a mediation role of both variables (Preacher & Hayes, 2008). The results concluded that all the mediation effects were statistically significant. Hence hypothesis 3 (Ha3) and hypothesis 4 (Ha4) were accepted.

Based on the findings, Ha3 was accepted, thus indicating that competence partially mediated the relationship between expectation and parental engagement in the child's speech therapy. In other words, parents with less expectation are likely to have lower competence, leading to lower engagement. Thus, even though the expectation is necessary, parents' competence also plays a significant role in determining the outcome of parental engagement. The Social Cognitive Theory (Bandura, 1986) also reported that parents with high self-efficacy strongly believe in their capabilities to achieve their

Table 3
Hypothesis testing on mediation analysis

Hypotheses	Relationship	Std. Beta	Std. Error	t-value	Confidence Interval (BC)		Decision
					LL	UL	
Ha3	Expectation <Competence> Engagement	0.194	0.032	6.062**	0.134	0.260	Accepted
Ha4	Communication <Competence> Engagement	0.068	0.020	3.480**	0.032	0.109	Accepted

Note. **p<0.001

expectations. They are also more motivated to complete tasks as they are more adaptive to challenging situations. Similarly, Arellano et al. (2019) examined the association between mothers’ sense of competence and future expectations. They reported that higher maternal expectations of their child’s future were associated with a more positive parenting sense of competence. Subsequently, this was linked with an increased engagement in their development activities.

Finally, Ha4 was also accepted based on the findings whereby parental competence partially mediated the relationship between communication and parental engagement in speech therapy for children with speech and language disorders. As a result, communication affected parental engagement both directly and indirectly through competence. Very often, parents who maintained good communication with their clinicians displayed a higher level of parental engagement. Furthermore, good parent-clinician communication

also improved parental competence and subsequently fostered better parental engagement. This finding was also supported by past studies in which positive communication with service providers led to a higher competence (Davies et al., 2017) that subsequently increased parental engagement in the intervention (Freckmann et al., 2017).

Additionally, Melvin et al. (2019) also recommended that speech therapists support parents by building a trusting relationship and working closely with them during intervention sessions. Such rapport can improve parental competence to make them more engaged in early intervention for speech pathology. Such findings were justifiable because parents are often responsible for initiating and practising at home. Furthermore, parents had higher competence levels when they had a strong working relationship through good communication with the clinicians (Ebert, 2018). To improve the confidence and competence of parents in guiding their

child's development, therapists should discuss the issues that affect parents' attitudes and feelings towards therapy, and offer adequate support and guidance to them.

CONCLUSION

Speech and language disorders are one of the leading development concerns in childhood. Timely speech therapy intervention can produce better outcomes for the children. However, it can be hindered by poor parental engagement in practising the intervention strategies at home. To increase parental engagement in these programmes, we need to understand the crucial role of parental engagement better. Hence, this study contributed to the literature gaps by providing empirical evidence on the association between expectation, communication, competence, and parental engagement in speech therapy for children with speech and language disorders. Moreover, the quantitative method in this study enabled the researcher to produce objective findings on the associated factors of parental engagement.

Additionally, the study findings also led to significant theoretical contributions. Based on the PTAPE (Phoenix et al., 2019), competence, expectation, and communication are among the factors that facilitate or inhibit the process of parental engagement. If these factors are limited, parents may attend therapy inconsistently or entirely withdraw from the therapy. The current findings showed that expectation, communication, and

competence significantly contribute to parental engagement. These findings were in line with PTAPE (Phoenix et al., 2019).

Meanwhile, the Engagement Capacity Model (Sieck et al., 2019) focuses more on patients capabilities, self-efficacy, or competence. These elements need to be enhanced to improve the clinicians' ability in helping the patients to engage. The present study results highlighted that parental competence mediated the relationship between communication, expectation, and parental engagement. Moreover, competence exerted the biggest influence on parental engagement compared to other factors, as highlighted by the Engagement Capacity Model (Sieck et al., 2019).

The current policy in speech therapy services centres on the child with speech and language disorder but often neglects significant others such as parents and family members. Hence, this study highlighted to policymakers the importance of prioritising strategies on improving parental competence, expectation, and parent-therapist communication. These features can ensure necessary actions for highly parental engagement in speech therapy.

Lastly, it is vital to customise treatment programmes attuned to each parent and family to achieve optimal parental engagement. Study findings have highlighted the importance of identifying parents at risk of low engagement for therapy, including those with more than one child in the family and those whose child has a more severe medical condition. Thus, to increase the engagement in these groups,

intervention should emphasise providing adequate information on the importance and credibility of speech therapy to establish an acceptable expectation for the rate and magnitude of their child's improvement.

Overall, this study identified the critical factors that affected parental engagement. Parental engagement in speech therapy for the paediatric population is a complex interaction between multiple factors, namely competence, expectation, and communication. By addressing these contributing factors of parental engagement, researchers, policymakers, and clinicians can better understand, plan, develop, and practise the most effective treatment strategies for children and family members involved in speech therapy.

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